

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE NM PFH 45-1(5)	PAGE 1 OF 25 PAGES
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 10-1-2003	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable) NM PFH 45-1(5)		
6. ISSUED BY Federal Highway Administration Central Federal Lands Highway Division 555 Zang Street, Room 259, HFAC-16 Lakewood, CO 80228-1010		7. ADMINISTERED BY (If other than Item 6) CODE			
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)		(✓)	9A. AMENDMENT OF SOLICITATION NO. NM PFH 45-1(5)		
		✓	9B. DATED (SEE ITEM 11) 9-4-2003		
			10A. MODIFICATION OF CONTRACT/ORDER NO.		
			10B. DATED (SEE ITEM 13)		
CODE	FACILITY CODE				

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning *one copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return *SEE 11. ABOVE copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

PLAN SHEETS

Remove plan sheet B3 and replace with revised plan sheet B3 bearing revision date 10/01/03. Revises the Schedule A quantities for Item 62501B and Item 62609A.

Remove plan sheet B12 and replace with revised plan sheet B12 bearing revision date 10/01/03. Revises the estimated percentage of topsoil from cuts and fills.

Remove plan sheet D63 and replace with revised plan sheet D63 bearing revision date 10/01/03. Modifies details for additional clarity.

BID SCHEDULE

Remove pages B-1 through B-9 and replace with revised pages B-1 through B-9 bearing revision date 10/01/03. Revises Items 62501B and 62609A in Schedule A.

SPECIAL CONTRACT REQUIREMENTS - see attached sheet.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)	
15B. CONTRACTOR/OFFEROR		16B. UNITED STATES OF AMERICA	
15C. DATE SIGNED		16C. DATE SIGNED	
(Signature of person authorized to sign)		BY (Signature of Contracting Officer)	

SPECIAL CONTRACT REQUIREMENTS

Remove page I-4 and replace with revised page I-4 bearing revision date 10/01/03. Revises Subsection 105.02 Local Material Sources.

Remove page I-15 and replace with revised page I-15 bearing revision date 10/01/03. Revises Subsection 107.02 Protection and Restoration of Property and Landscape.

Remove page I-33 and replace with revised page I-33 bearing revision date 10/01/03. Revises Subsection 152.03 Survey and Staking Requirements.

Remove page I-34 and replace with revised page I-34 bearing revision date 10/01/03. Revises Subsection 152.05.

Remove page I-51 and replace with revised page I-51 bearing revision date 10/01/03. Revises Subsection 203.05 Disposing of Materials, paragraph (b) Burn.

Remove page I-55 and replace with revised page I-55 bearing revision date 10/01/03. Revises Subsection 204.16, paragraph (g) Waste.

Remove page I-62 and replace with revised page I-62 bearing revision date 10/01/03. Revises Subsection 255.02.

Remove page I-122 and replace with revised page I-122 bearing revision date 10/01/03. Revises Subsection 622.02 Rental Equipment.

Remove page I-146 and replace with revised page I-146 bearing revision date 10/01/03. Adds Section 706 Concrete and Plastic Pipe.

Add page I-148A bearing revision date 10/01/03. Adds Section 714 Geotextile and Geocomposite Drain Material.

Remove page I-149 and replace with revised page I-149 bearing revision date 10/01/03. Page reformatted to retain page numbering sequence.

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15101	Mobilization		
	ALL	Lump Sum	\$ _____
15202	Slope, reference, and clearing and grubbing stakes		
	12.400		
	km	\$ _____	\$ _____
15203	Centerline re-establishment		
	12.400		
	km	\$ _____	\$ _____
15204	Drainage structure survey and staking		
	106		
	Each	\$ _____	\$ _____
15206	Retaining wall survey and staking		
	ALL	Lump Sum	\$ _____
15207	Grade finishing stakes		
	24.800		
	km	\$ _____	\$ _____
15209	Miscellaneous survey and staking		
	200		
	Hour	\$ _____	\$ _____
15212	Approach road survey and Staking		
	15		
	Each	\$ _____	\$ _____
15216A	Parking area survey and staking		
	6		
	Each	\$ _____	\$ _____
15401	Contractor testing		
	ALL	Lump Sum	\$ _____
15501	Construction schedule		
	ALL	Lump Sum	\$ _____
15703	Silt fence		
	5,000		
	m	\$ _____	\$ _____
15731A	Sediment wattle, 225 mm		
	8,000		
	m	\$ _____	\$ _____
15731B	Sediment wattle, 450 mm		
	110		
	m	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)

SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
15733	Sediment log 610 Each	\$ _____	\$ _____
15801	Watering for dust control 10,000 m3	\$ _____	\$ _____
20101	Clearing and grubbing 30.0 ha	\$ _____	\$ _____
20201	Selective clearing 5.0 ha	\$ _____	\$ _____
20304SLH	Removal and disposal of slash piles ALL	Lump Sum	\$ _____
20305	Removal of structures and obstructions ALL	Lump Sum	\$ _____
20401	Roadway excavation 287,250 m3	\$ _____	\$ _____
20402	Subexcavation 4,000 m3	\$ _____	\$ _____
20403	Unclassified borrow 12,720 m3	\$ _____	\$ _____
20801	Structure excavation 1,110 m3	\$ _____	\$ _____
20802	Foundation fill 800 m3	\$ _____	\$ _____
21101	Roadway obliteration 31,800 m2	\$ _____	\$ _____
25101B	Placed riprap class 2 1,140 m3	\$ _____	\$ _____

Bid Schedule A

 Project: NM PFH 45-1(5)
 SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
25101C	Placed riprap class 3 830 m3	\$ _____	\$ _____
25101D	Placed riprap class 4 700 m3	\$ _____	\$ _____
25101E	Placed riprap class 5 650 m3	\$ _____	\$ _____
25101F	Placed riprap class 6 125 m3	\$ _____	\$ _____
25105GC	Grouted riprap class 3 250 m3	\$ _____	\$ _____
25303	Gabions, galvanized or aluminized coated 37 m3	\$ _____	\$ _____
25501	Mechanically stabilized earth wall 4,800 m2	\$ _____	\$ _____
26004D	Soil nails, epoxy coated, 7.0 meter length 175 Each	\$ _____	\$ _____
26005	Verification soil nails 4 Each	\$ _____	\$ _____
30101	Aggregate base 37,960 t	\$ _____	\$ _____
30606	Magnesium chloride 800 t	\$ _____	\$ _____
40201	Minor hot asphalt concrete 105 t	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)

SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
55201A	Structural concrete class A (AE)		
	410		
	m3	\$ _____	\$ _____
55401	Reinforcing steel		
	42,800		
	kg	\$ _____	\$ _____
56602Q	Reinforced shotcrete, 200 mm depth		
	385		
	m2	\$ _____	\$ _____
60201M	600 mm pipe culvert		
	1,090		
	m	\$ _____	\$ _____
60201N	750 mm pipe culvert		
	310		
	m	\$ _____	\$ _____
60201P	900 mm pipe culvert		
	330		
	m	\$ _____	\$ _____
60201Q	1050 mm pipe culvert		
	300		
	m	\$ _____	\$ _____
60201R	1200 mm pipe culvert		
	200		
	m	\$ _____	\$ _____
60201T	1500 mm pipe culvert		
	80		
	m	\$ _____	\$ _____
60206M	End section for 600 mm pipe culvert		
	105		
	Each	\$ _____	\$ _____
60206N	End section for 750 mm pipe culvert		
	34		
	Each	\$ _____	\$ _____
60206P	End section for 900 mm pipe culvert		
	28		
	Each	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)

SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60206Q	End section for 1050 mm pipe culvert 23 Each	\$ _____	\$ _____
60206R	End section for 1200 mm pipe culvert 12 Each	\$ _____	\$ _____
60206T	End section for 1500 mm pipe culvert 10 Each	\$ _____	\$ _____
60209M	Elbow, 600 mm 48 Each	\$ _____	\$ _____
60209N	Elbow, 750 mm 1 Each	\$ _____	\$ _____
60304RGD	24'-0" span, 12'-0" rise, structural plate arch, 0.188 inch 34 m	\$ _____	\$ _____
60403A	Inlet type 1 6 Each	\$ _____	\$ _____
60423P	900 mm stilling well 13 Each	\$ _____	\$ _____
60423R	1200 mm stilling well 2 Each	\$ _____	\$ _____
60423S	1350 mm stilling well 1 Each	\$ _____	\$ _____
60501	Underdrain system 2,400 m	\$ _____	\$ _____
60602M	Pipe anchor assembly, 600 mm 23 Each	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)
SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
60602P	Pipe anchor assembly, 900 mm 4 Each	\$ _____	\$ _____
60602Q	Pipe anchor assembly, 1050 mm 3 Each	\$ _____	\$ _____
60917	Timber curb 1,200 m	\$ _____	\$ _____
61701DDAB	Guardrail system G4, type 4, class A (wood posts) 4,200 m	\$ _____	\$ _____
61701K	Guardrail system CRT, type1, class A 125 m	\$ _____	\$ _____
61702D	Terminal section type G4-BAT 3 Each	\$ _____	\$ _____
61702E	Terminal section type CRT 8 Each	\$ _____	\$ _____
61702EA	Terminal section type extruder 31 Each	\$ _____	\$ _____
61806	Barrier stone 80 Each	\$ _____	\$ _____
61901BC	Fence barbed wire type, 4 strand 2,100 m	\$ _____	\$ _____
61901BD	Fence barbed wire type, 5 strand 11,100 m	\$ _____	\$ _____
61901FA	Fence temporary construction 1,600 m	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)

SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
61902BL	Gate metal type, 6600 mm width 1 Each	\$ _____	\$ _____
61902BWD	Gate barbed wire, 4-strand 1 Each	\$ _____	\$ _____
61902BWE	Gate barbed wire, 5-strand 5 Each	\$ _____	\$ _____
61902FB	Gate road closure, double 1 Each	\$ _____	\$ _____
61903K	Cattle guard, 9.6 meter 4 Each	\$ _____	\$ _____
62019	Stone masonry tree well 2 Each	\$ _____	\$ _____
62201AD	Dump truck, 7 cubic meter minimum capacity 150 Hour	\$ _____	\$ _____
62201B	Backhoe 70 Hour	\$ _____	\$ _____
62201CD	Wheel loader, 2 cubic meter minimum rated capacity 150 Hour	\$ _____	\$ _____
62201DD	Bulldozer, 120 kW minimum flywheel power 70 Hour	\$ _____	\$ _____
62201LB	Motor grader, 3.6 meter minimum blade 70 Hour	\$ _____	\$ _____
62201M	Hydraulic excavator 400 Hour	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)

SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
62301	General labor 500 Hour	\$ _____	\$ _____
62406	Placing conserved topsoil 28,900 m3	\$ _____	\$ _____
** 62501B	Seeding, hydraulic method 20.0 ha	\$ _____	\$ _____
62504B	Mulching, hydraulic method (bonded fiber matrix) 20.0 ha	\$ _____	\$ _____
** 62609A	Plant government-furnished container stock, 4 liter 3,700 Each	\$ _____	\$ _____
62901B	Erosion control mat type 2 11,000 m2	\$ _____	\$ _____
63301	Sign installation 70 Each	\$ _____	\$ _____
63306B	Object markers type 2 15 Each	\$ _____	\$ _____
63307K	Delineators, type A 835 Each	\$ _____	\$ _____
63403A	Pavement markings type A 20 L	\$ _____	\$ _____
63505B	Barricade type 2 75 Each	\$ _____	\$ _____
63505C	Barricade type 3 15 Each	\$ _____	\$ _____

Bid Schedule A

Project: NM PFH 45-1(5)
SACRAMENTO RIVER ROAD

Pay Item No.	Estimated Quantity	Unit Bid Price	Amount Bid
63506	Cone 75 Each	\$ _____	\$ _____
63507	Construction sign 104 m2	\$ _____	\$ _____
63508	Drum 100 Each	\$ _____	\$ _____
63509	Flagger 5,000 Hour	\$ _____	\$ _____
63510	Pilot car 1,000 Hour	\$ _____	\$ _____
63511	Temporary concrete barrier 63 m	\$ _____	\$ _____
63521A	Warning light type A 100 Each	\$ _____	\$ _____
63521B	Warning light type B 30 Each	\$ _____	\$ _____
63521C	Warning light type C 50 Each	\$ _____	\$ _____
63606MA	Conduit, 150 mm, PVC 65 m	\$ _____	\$ _____
NM PFH 45-	0	\$ _____	\$ _____

TOTAL \$ _____

Submitted by: _____
Name of Bidder

Bid Schedule A

Project: NM PFH 45-1(5)
SACRAMENTO RIVER ROAD

- (g) Shoring systems and cofferdams greater than 1800 millimeters in height.
 - (h) All shoring systems that support traffic loadings.
 - (i) Forms and falsework for all structures greater than 1800 millimeters in height.
 - (j) Post-tensioning systems
 - (k) Ground anchors, soil nail, and rock bolt assembly details, layout, and installation and testing procedures.
 - (l) Tie back wall details.
 - (m) Alternate retaining wall details.
- (3) Furnish drawings which bear the seal and signature of a professional engineer proficient in forms and falsework design, and who is licensed in the state where the project will be constructed, for the following:
- (a) Falsework for any structure with a span exceeding 5000 millimeters.
 - (b) Falsework for any structure with a height exceeding 4300 millimeters.
 - (c) Falsework for structures where traffic, other than workers involved in constructing the structure, will travel under the structure.

Section 105. - CONTROL OF MATERIAL

105.01 Source of Supply and Quality Requirements. Add the following:

Submit samples of materials for quality verification testing for materials required to conform to Sections 703, 704, and 705.

Materials containing petroleum-based solvents such as cutback asphalts and traffic paints may be restricted from use by local laws or ordinances in certain geographic areas. Upon presenting proof of such restrictions, alternate materials considered acceptable to the CO may be substituted for the materials specified in the contract.

105.02 Local Material Sources.

(b) Government-listed sources. Add the following:

The Hornbuckle Hill source, as referenced in Materials Report 97-07, august 1997, is not a potential materials source. The ferenced Cathy Canyon Source is not available for borrow excavation.

(c) Contractor-located sources. Add the following to the first paragraph:

For contractor-located, non-commercial sources, secure environmental clearances according to Subsection 107.10.

105.04 Storing and Handling Material. Add the following after the third sentence of the second paragraph:

For Contractor-located, non-commercial staging and storing and material handling areas, secure environmental clearances according to Subsection 107.10.

107.02 Protection and Restoration of Property and Landscape. Add the following:

The information on the plans concerning existing utilities has been shown based on the best information available and actual location may be different from that shown. An existing 6-inch underground waterline runs adjacent to the existing roadway throughout the project limits. Above Scott Able canyon, the waterline is buried shallow and may be exposed in some areas. Below Scott Able canyon, a recent relocation project by the Oro Grande Water Organization has buried the waterline approximately 1.2 meters deep. Care should be taken to avoid any contact with this waterline; damage to the waterline as a result of the contractors operations will be repaired at the contractor's expense.

Contact Oro Grande Water Organization prior to beginning construction to verify the location and depths of the waterline at all areas of potential conflict with the construction. The utility will stake the existing waterline in the field. In the event of breakage of the Oro Grande waterline, immediately notify James Christensen, BLM, at (505) 525-4322 and Eric Bailey, Oro Grande Water Organization, at (915) 775-3397.

Oro Grande Water Organization
Mr. Eric Bailey
P.O. Box 227
Cloudcroft, New Mexico 88317
(915) 775-3397

~~There are overhead power lines and poles within the project limits that require relocation. Relocation of the affected utilities will be accomplished in conjunction with the work. Prior to bidding, verify relocation needs and locations with the Otero County Electric COOP (OCEC). The power line and pole located near station 60+110 will require coordination and relocation in conjunction with the embankment work. Prior to beginning work at this location, coordinate with OCEC to schedule the relocation of the power pole. Work with OCEC to effectively determine a time frame for the relocations which minimizes impacts to the contractors work and schedule, and minimizes cost to the utility company. Coordinate power line and pole relocations with the following:~~

There are overhead powerlines and poles within the project limits that require relocation. Utility relocation will be accomplished in conjunction with the work. Prior to bidding, verify relocation needs and locations with the Otero County Electric COOP (OCEC). Prior to beginning work, coordinate with the OCEC to schedule the relocations. Work with the OCEP to determine a time frame for the relocations that minimizes impact to the contract work and schedule, and minimizes cost to the utility company. Coordinate staking and earthwork to allow the OCEC to perform the relocations to minimize delay to the project. Construction of the West Side Road embankment near Station 60+110 will require the utility relocation in conjunction with embankment construction. Coordinate power line and pole relocations with the following:

OCEC
Mr. Paul Marez
202 Burro Avenue
Cloudcroft, New Mexico 88317
(505) 682-2521

Notify the CO and the U.S. Forest Service one week prior to any ground-disturbing work between 0+540 and 0+680. The U.S. Forest Service will monitor this site while construction activities are on-going. The U.S. Forest Service contact is Ms. Nancy Taylor, Forest Engineer (Ph. # (505) 434-7370).

(7) Horizontal and vertical control, slope staking, radius point staking, and all other work required to construct the Sunspot Road Intersection in accordance with the details provided in the construction plans.

(8) *Re-establish missing Government-set terrain cross-section reference hubs and control points.*

(m) Intermediate surveying and staking. Delete the text of the third paragraph and substitute the following:

Remeasure quantities if it has been determined that any portion of the work is acceptable but has not been completed to the lines, grades, and dimensions shown on the plans or established by the CO.

Add the following subsections:

(n) Approach Road Survey and Staking. This work consists of surveying, staking, recording of data, and cross sections for all road connections within the limits of the project. The work includes both horizontal and vertical control, slope staking, radius point staking, and all other work required to construct the road connections in accordance with the details provided in the construction plans.

(o) Parking Area Survey and Staking. Perform all survey, staking and recording required for the layout and control of the parking areas and pullouts on the project. The work includes horizontal and vertical control, slope staking and all other work required to construct the parking areas and pullouts in conformance with the details provided in the construction plans.

152.03 Surveying and Staking Requirements. Delete Table 152-1 and substitute the following:

Table 152-1
Construction Survey and Staking Tolerances ⁽⁷⁾

Staking Phase	Horizontal	Vertical
Existing Government network control points	±20 mm	±8 mm * \sqrt{K} ⁽⁵⁾
Local supplemental control points set from existing Government network points	±10 mm	±3 mm * \sqrt{N} ⁽⁶⁾
Centerline points ⁽¹⁾ – (PC), (PT), (POT), and (POC) including references	±10 mm	±10 mm
Other centerline points	±50 mm	±50 mm
Cross-section points and slope stakes ⁽²⁾	±50 mm	±50 mm
Slope stake references ⁽²⁾	±50 mm	±50 mm
Culverts and minor drainage structures	±50 mm	±20 mm
Retaining walls and curb and gutter	±20 mm	±10 mm
Bridge substructures	±10 mm ⁽³⁾	±10 mm
Bridge superstructures	±10 mm ⁽³⁾	±10 mm
Clearing and grubbing limits	±500 mm	---
Roadway subgrade finish stakes ⁽⁴⁾	±50 mm	±10 mm
Roadway finish grade stakes ⁽⁴⁾	±50 mm	±10 mm

⁽¹⁾ Centerline points: PC – point of curve; PT – point of tangent; POT – point on curve.

⁽²⁾ Take the cross-sections normal to the centerline ±1 degree.

⁽³⁾ Bridge control is established as a local network and the tolerances are relative to that network.

⁽⁴⁾ Includes paved ditches

⁽⁵⁾ K is the distance in kilometers

⁽⁶⁾ N is the number of instrument setups.

⁽⁷⁾ At 95% confidence level. Tolerances are relative to existing Government network control points.

Measurement

152.05 Add the following:

~~Re-establishing missing Government-set terrain cross-section reference hubs, control points, and stakes will be measured under Miscellaneous Survey and Staking when it is paid by the hour.~~

Measure re-establish missing Government-set terrain cross-section reference hubs and control points by the hour. No payment will be made for re-establishing missing hubs, control points, or stakes after construction operations have begun.

Payment

152.06 Add the following pay items:

15212	Approach Road Survey and Staking	Each
15216A	Parking Area Survey and Staking	Each

Section 202. – ADDITIONAL CLEARING & GRUBBING**202.02 Definitions.**

(a) Selective clearing. Delete the text and substitute the following:

Includes felling trees, marked as part of the timber sale contract, outside of the construction limits. Grubbing will not be required.

Section 203. - REMOVAL OF STRUCTURES & OBSTRUCTIONS**Construction Requirements**

203.03 Salvaging Material. Add the following:

Remove all signs and cattle guards within the project limits and stockpile as directed by the CO. Contact Mr. Bill Lee Parker, Road Superintendent (Ph. # (505) 437-7636) to arrange for pickup.

203.05 Disposing of Materials. Add the following:

Remove and dispose of all slash piles generated during the NM PFH 45-1(4) project located from 12+530 to 21+300, which is just south of the intersection of Sacramento River Road and NM State Highway 6563, as directed by the CO.

Disposal areas for burying clearing debris, which cannot be otherwise burned or chipped, are not available outside the construction limits on National Forest lands. Remove such material from the project and dispose.

(a) Remove from project. Add the following:

Secure environmental clearances according to Subsection 107.10.

(b) Burn. Add the following:

Burn utilizing an approved air curtain forced combustion incinerator. An acceptable incinerator is DriAll Air Curtain Destructor, manufactured by DriAll, Inc., Box 309, Attica, Indiana 47918, phone (317) 295-2255. Do not perform open-air burning on the project. *Obtain the required burning permits prior to using a combustion incinerator.*

The locations and limits for air curtain forced combustion incinerator staging sites will be designated by the CO.

(c) Bury. Delete the text and substitute the following:

Burying is not allowed within the project limits or within the National Forest. Dispose of material according to 203.05(a), (b), or (e).

Conserved material taken from stockpiles and used in Section 204 work except topsoil measured under Section 624. Only materials required to be conserved by the CO are eligible for measurement under this item.

(2) Add the following:

(m) Conserved topsoil stripped from fills.

~~(g) Waste. Add the following:~~

~~Measure waste only if hauled off of the project. Material wasted within the project limits will not be measured for payment.~~

Payment

204.17 Add the following:

Payment for Item 20401 is limited to ten percent of the plan quantity of excavation in the cut until the slope rounding in that cut is completed.

Section 205. - ROCK BLASTING

Description

205.01 Add the following:

The area blasted shall be scaled of loose rock and debris. All blasting caps, lead wire, and other material associated with each blast shall be picked up after each blast, and deposited off the project.

Construction Requirements

205.04 Blasting Plan. Delete the text of this subsection and substitute the following:

(a) Blasting Condition Survey and Environmental Monitoring. Arrange for a preblast survey of any nearby buildings, structures, or utilities, which could potentially be at risk from blasting damage. Use a survey method acceptable to the Contractor's insurance company. Damage resulting from blasting is the Contractor's responsibility. Make all preblast survey records available to the CO. Notify the CO and occupants of local buildings at least 24 hours prior to the commencement of blasting.

Control ground vibrations by the use of properly designed delay sequences and allowable charge weights per delay when blasting near, buildings, structures, or utilities which may be subject to damage from blast induced ground vibrations. Base allowable charge weights per delay by

**Table 251-1
Sampling and Testing**

Material or Product	Property or Characteristic	Test Methods or Specifications	Frequency	Sampling Point
Grout	Making test specimens Compressive strength ⁽²⁾	AASHTO T 23 AASHTO T 22	1 sample per installation ⁽¹⁾	Job site

(1) Sample consists of 2 test specimens.

(2) The compressive strength will be the average of two test specimens.

Section 252. – SPECIAL ROCK EMBANKMENT AND ROCK BUTTRESS

Measurement

252.05 Delete the text of this subsection and substitute the following:

Measure the volume of rock and select borrow by the cubic meter in place for rock buttresses, rock embankment, and grouted rock embankment. Do not measure grout for payment.

Section 255.—MECHANICALLY STABILIZED EARTH WALLS

Delete the entire Section and substitute with the following:

Description

255.01 This work consists of designing, furnishing, and constructing a mechanically stabilized earth (MSE) walls with steel (mesh or strip) or geogrid reinforcement in accordance with the details shown on the plans.

Materials

255.02 Conform to the following Section and Subsections:

Geotextile	714.01
Geocomposite sheet drains	714.02
Mechanically stabilized earth wall material	720.01
Foundation fill	704.01
Reinforced Fill (Select Granular Backfill)	704.10
Retained Fill (Structural Backfill)	704.04
MSE wall facing fill	704.13
<i>Plastic Pipe</i>	<i>706.08</i>
<i>Geocomposite Sheet Draine</i>	<i>714.02(b)</i>

Material**620.02.** Delete the mortar reference and substitute the following:

Mortar

712.05(a)

Construction Requirements**620.04 Placing Stone.** Delete the first paragraph and substitute the following:

Place stone to provide a uniform pattern and color. Do not place stone masonry when the ambient temperature is below 0°C. Maintain completed masonry at a temperature above 4°C for 24 hours after construction. Clean all stones thoroughly and moisten immediately before placing. Clean and moisten the bed.

Add the following after the first paragraph:

When removing and resetting stone masonry, use hand tools to clean the exposed faces of the stones of all mortar before resetting.

Measurement**620.11** Add the following:

Measure tree wells by the each.

Payment**620.12** Add the following pay item:

Pay Item	Pay Unit
62019 Stone Masonry Tree Well	Each

Section 622. - RENTAL EQUIPMENT**Construction Requirements****622.02 Rental Equipment.** Add the following:

~~Use contract hours for Item 62201M, Hydraulic Excavator, for work associated with supplying topsoil to ledges, benches and seeding pockets described under Subsection 624.04(b) of these Special Contract Requirements. The cost of hauling topsoil to these sites will not be directly paid.~~

Use contract hours for Item 62201M, Hydraulic Excavator, for placing topsoil on ledges, benches, and seeding pockets described under Subsection 624.04(b) of these Special Contract Requirements. The cost of hauling topsoil to these sites will not be directly paid.

Section 705. - ROCK

REVISED 10/01/03

705.02 Riprap Rock. Delete the text of this subsection and substitute the following:

705.02 Riprap Rock. Furnish hard, durable, angular rock that is resistant to weathering and water action and free of organic or other unsuitable material. Do not use shale, rock with shale seams, or other fissile or fissured rock that may break into smaller pieces in the process of handling and placing. Conform to the following:

(a) Apparent specific gravity, AASHTO T 85	2.50 min.
(b) Absorption, AASHTO T 85	4.2% max.
(c) Coarse durability index, AASHTO T 210	50 min.
(d) Gradation for the class specified	Table 705-1
(e) Los Angeles abrasion, AASHTO T96	50% max.

Section 706. - CONCRETE AND PLASTIC PIPE**706.08 Plastic Pipe** Delete (d) and substitute the following:

(d) Plastic pipe for Underdrains, Polyethylene perforated or nonperforated corrugated pipe shall conform to AASHTO M 252.

Perforated or nonperforated Polyvinyl Chloride Pipe-Smooth Interior, Smooth or Ribbed Exterior, shall conform to ASTM F 758 or ASTM F 949

Section 709. - REINFORCING STEEL AND WIRE ROPE**709.01 Reinforcing Steel.****(b) Reinforcing bars.** Delete the text and substitute the following:

Furnish deformed, grade 420 bars conforming to AASHTO M 31M, M 42M, or M 53M.

(c) Epoxy coated reinforcing bars. Delete the first paragraph and substitute the following:

Furnish bars conforming to Subsection 709.01(b). Conform to AASHTO M 284M.

(d) Tie bars. Delete the text and substitute the following:

Furnish deformed, grade 420 bars conforming to AASHTO M 31M or M 42M, except do not use AASHTO M 42M steel for tie bars bent and restrengthened during construction.

(e) Hook bolts. Delete the first sentence and substitute the following:

Furnish plain, grade 420 bars conforming to AASHTO M 31M or M 42M with M14 rolled threads or M16 cut threads.

Section 710. - FENCE AND GUARDRAIL**710.09 Guardrail Posts.** Delete the text of this subsection and substitute the following:

Conform to the AASHTO-AGC-ARTBA Guide to Standardized Highway Barrier Hardware," 1995 edition.

I-148A

Section 714. - GEOTEXTILE AND GEOCOMPOSITE DRAIN MATERIAL

714.02 Geocomposite Drains

(b) Geocomposite sheet drains. Add the following:

For MSE wall construction - Furnish a prefabricated sheet drain with a core or net:

- *encapsulated in a Type I-D (Subsection 714.01) non-woven geotextile.*
- *capable of draining from both sides of the sheet.*
- *with a drainage composite capable of sustaining a minimum flow rate of 1 liter per second per meter of width (5 gallons per minute per foot of width) when tested according to ASTM D 4716.*

Perform the test under the following test conditions:

- *300-millimeter long specimen*
- *Pressure of 100-kPa (14.5 psi)*
- *Gradient of 1.0*
- *100-hour seating period*
- *Closed-cell foam rubber between platens and geocomposite*

Section 718. - TRAFFIC SIGNING AND MARKING MATERIAL**718.04 Steel Panels.** Delete the first paragraph and substitute the following:

Furnish 2-millimeter continuous coat galvanized sheet steel blanks conforming to ASTM A 653M. Mill phosphatize the zinc coating (designation G 90) to a thickness of 1.1 ± 0.55 grams per square meter of surface area.

718.08 Signposts.**(b) Steel posts.** Delete the text and substitute the following:

(1) U-channel steel posts. Furnish flanged, channel, galvanized steel posts conforming to ASTM A 499, grade 60, and the following:

(a) Dimensions of U cross section

(1) Width of opened end of U including flanges	75-90 mm
(2) Width of closed end of U	25-40 mm
(3) Depth of U	25-50 mm
(4) Thickness of steel	3-5 mm

(b) Punching. Starting 25 millimeters from the top and extending the full length of the post, drill or punch 10 millimeter holes on 25 millimeter centers along the centerline of the bottom of the U. Remove all burrs and sharp edges.

(c) Galvanizing after punching

AASHTO M 111

(2) Square tubular steel posts. Furnish square tubular galvanized steel posts conforming to ASTM A 1011M, grade 55, or ASTM A 715, grade 60, and the following:

(a) Dimensions of cross section

(1) Outside dimensions	44.5 mm by 44.5 mm or 50.8 mm by 50.8 mm
(2) Wall thickness	2.1 mm
(3) Mass	2.5-3.0 kg/m

(b) Punching. Starting 25 millimeters from the top and extending the full length of the post, drill or punch 11 millimeter holes on 25 millimeter centers along the centerline of all four sides, in true alignment and opposite each other directly and diagonally. Remove all burrs and sharp edges.

*(c) Galvanizing after punching
(inside and outside of post)*

ASTM A 635M, Z275

Add the following:

(d) Corrosion resistant steel posts. Furnish post and breakaway plates conforming to ASTM A 588 or ASTM A 242.

718.12 Delineator and Object Marker Retroreflectors.**(b) Type 2 (retroreflective sheeting).** Delete the first sentence and substitute the following:

THE FOLLOWING QUANTITIES ARE APPROXIMATE UNLESS NOTED AS A FINAL PAY ITEM. PAYMENT WILL BE MADE FOR THE ACTUAL QUANTITIES OF WORK PERFORMED AND ACCEPTED OR FOR MATERIALS FURNISHED IN ACCORDANCE WITH THE CONTRACT.																REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
SUMMARY OF QUANTITIES																6	NM	PFH 45-1(5) SAC. RIVER RD.	B3	B16
SHEET NUMBER			A3	B4-B7	B8-B11	B12	B15-B16	C53	D5	D92	E1-E3	ESTIMATED QUANTITIES				UPDATED 10/01/03				
SHEET DESCRIPTION												SCHEDULE A		SCHEDULE B						
ITEM NO.	ITEM	UNIT	TYPICAL SECTION	TAB. OF QUANTITIES	DRAINAGE SUMMARY	GRADING SUMMARY	MISC. DETAILS	SUNSPOT SUMMARY	ROCK INLAY DETAILS	TRAFFIC CONTROL	PLANTING SUMMARY	PLAN	BID SCHEDULE	PLAN	BID SCHEDULE	REMARKS AND/OR DETERMINATION OF ESTIMATED QUANTITIES				
SHEET 3 OF 3																				
61903K	CATTLE GUARD, 9.6 METER	EACH		4								4	4	4	4					
62019	STONE MASONRY TREE WELL	EACH											2		2	See Apple Tree Canyon Parking lot, sheet				
62201AD	DUMP TRUCK, 7 CUBIC METER MIN. CAPACITY	HOUR											150		150					
62201B	BACKHOE	HOUR											70		70					
62201CD	WHEEL LOADER, 2 CUBIC METER MIN. RATED CAPACITY	HOUR											150		150					
62201DD	BULLDOZER, 120 kW MINIMUM FLYWHEEL POWER	HOUR											70		70					
62201LB	MOTOR GRADER, 3.6 METER MINIMUM BLADE	HOUR											70		70					
62201M	HYDRAULIC EXCAVATOR	HOUR											400		400					
62301	GENERAL LABOR	HOUR											500		500					
62406	PLACING CONSERVED TOPSOIL	m3				25891		22				27513	28900	27513	28900	Includes approx. 1,600 m3 of topsoil stockpiled at Danley Canyon, 13+200 (See SCRs).				
62501B	SEEDING, HYDRAULIC METHOD	ha											20		20					
62504B	MULCHING, HYDRAULIC METHOD (BONDED FIBER MATRIX)	ha											20		20					
62508	WATER	m3													760	For plant establishment.				
62609A	PLANT GOVERNMENT-FURNISHED CONTAINER STOCK, 4 LITER	EACH									3520	3520	3700	3520	3700					
62901B	EROSION CONTROL MAT, TYPE 2	m2		10562								10562	11000	10562	11000					
63301	SIGN INSTALLATION	EACH		66								66	70	66	70					
63306B	OBJECT MARKERS, TYPE 2	EACH		14								14	15	14	15					
63307K	DELINEATORS, TYPE A	EACH		792								792	835	792	835					
63403A	PAVEMENT MARKINGS, TYPE A	L		1941				17				17	20	1958	2060					
63406	PAVEMENT MARKINGS, SYMBOLS, TYPE H	EACH		9										9	9					
63505B	BARRICADE, TYPE 2	EACH								75		75	75	75	75					
63505C	BARRICADE, TYPE 3	EACH								15		15	15	15	15					
63506	CONE	EACH								75		75	75	75	75					
63507	CONSTRUCTION SIGN	m2								104		104	104	104	104					
63508	DRUM	EACH								100		100	100	100	100					
63509	FLAGGER	HOUR								7500		5000	5000	7500	7500					
63510	PILOT CAR	HOUR								1300		1000	1000	1300	1300					
63511	TEMPORARY CONCRETE BARRIER	m								60		60	63	60	63					
63518VPGA	VEHICLE POSITIONING GUIDES	km								12.4				12.4	12.4					
63521A	WARNING LIGHT, TYPE A	EACH								100		100	100	100	100					
63521B	WARNING LIGHT, TYPE B	EACH								30		30	30	30	30					
63521C	WARNING LIGHT, TYPE C	EACH								50		50	50	50	50					
63606MA	CONDUIT, 150 mm, PVC	m										60	65	60	65					

GRADING SUMMARY																		
Station to Station	Pay Item 20401 ROADWAY EXCAVATION				ADJUSTMENTS TO EXCAVATION					Total Excavation Available for Fills (CCM)	*** Pay Item 20402 Subexcavation (BCM)	ROADWAY EMBANKMENT (No Pay)						Cumulative Mass Ordinate
	(BCM)				Shrink/ Swell Factor	MSE wall Excavation (CCM)	Total Adjusted Excavation (CCM)	(-) Riprap Removal (CCM)	* (-) Conserved Topsoil (CCM)			(CCM)						
	Roadway prism	Approach Roads & Parking Areas	** Misc Excavation	Total unadjusted Excavation (BCM)								Roadway prism	Approach Roads & Parking Areas	*** Backfill Subex- cavation	** Misc. Embankment	Topsoil Backfill Under Fills	Total Embankment	
0+158 - 1+000	2,754	32		2,786	0.85		2,368	231	160	1,977	251	4,345	79	251	480	373	5,528	-3,551
1+000 - 2+000	22,363	195		22,558	0.90		20,302	282	207	19,813	326	7,311	297	326	-	483	8,416	7,846
2+000 - 3+000	24,277			24,277	0.90		21,849	282	279	21,288	326	5,677		326	-	651	6,654	22,480
3+000 - 4+000	8,872			8,872	0.90		7,985	282	345	7,358	326	12,482	31	326	-	804	13,643	16,196
4+000 - 5+000	5,801			5,801	0.90		5,221	282	297	4,642	326	7,523	55	326	97	692	8,693	12,146
5+000 - 6+000	2,143			2,143	0.90		1,929	282	288	1,359	326	15,909	402	326	-	672	17,308	-3,804
6+000 - 7+000	35,259	47		35,306	0.95		33,541	282	172	33,087	326	22,831	1,777	326	1,126	400	26,460	2,823
7+000 - 8+000	33,312		178	33,490	1.00		33,490	282	225	32,983	326	12,678		326	2,494	525	16,023	19,783
8+000 - 9+000	16,211		237	16,448	1.00		16,448	282	293	15,873	326	18,345		326	27	683	19,381	16,276
9+000 - 10+000	11,307	110	1,124	12,541	1.00		12,541	282	262	11,997	326	24,275	6,987	326	3,640	9,497	44,724	-16,451
10+000 - 11+000	33,800	2,602	929	37,331	1.05	3,867	43,065	282	77	42,705	326	42,304	2,057	326	3,606	181	48,473	-22,220
11+000 - 12+000	52,249	80	273	52,602	1.05	5,850	61,082	282	58	60,742	326	26,301	27,568	326	116	7,907	62,217	-23,695
12+000 - 12+520	19,336			19,336	1.05		20,303	147	109	20,048	169	6,928		169	469	253	7,820	-11,467
Totals	267,684	3,066	2,741	273,491		9,717	280,123	3,479	2,771	273,873	4,000	206,909	39,253	4,000	12,055	23,120	285,340	

DEFINITIONS:

- BCM = Bank Cubic Meters = One Cubic meter of material as it lies in the natural Bank state.
- CCM = Compacted Cubic Meters = One Cubic meter of material after it has been Compacted to specification density.
- * For design purposes, it is assumed that 11% of conserved topsoil will come from cuts and 89% from under constructed fills.
- ** Miscellaneous quantities include excavation and/or embankment required for identified roadway obliteration areas.
- *** Subexcavation area as directed by CO.

NOTE:

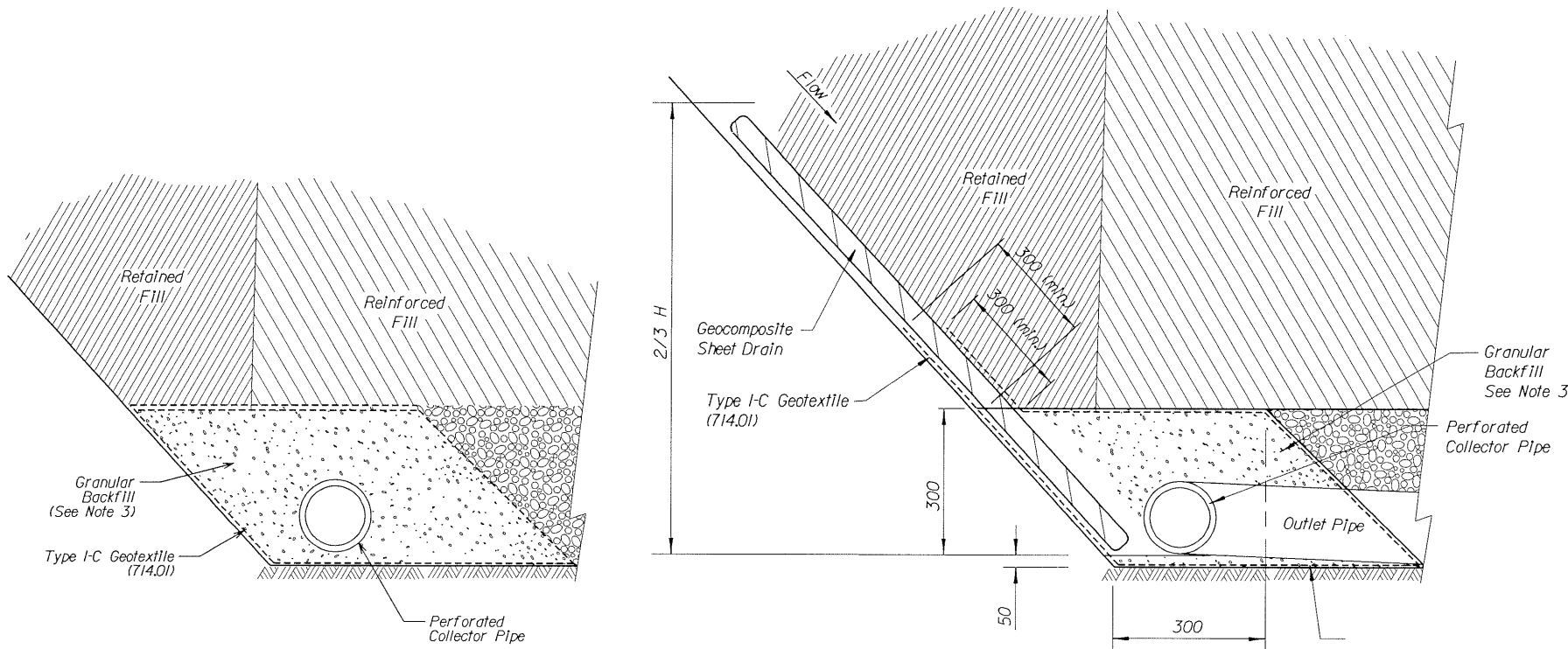
See sheet C47 for Sunspot Intersection grading summary.

REG	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
6	NM	PFH 45-1(5) SAC. RIVER ROAD	D63	D96

REVISED 10-01-03

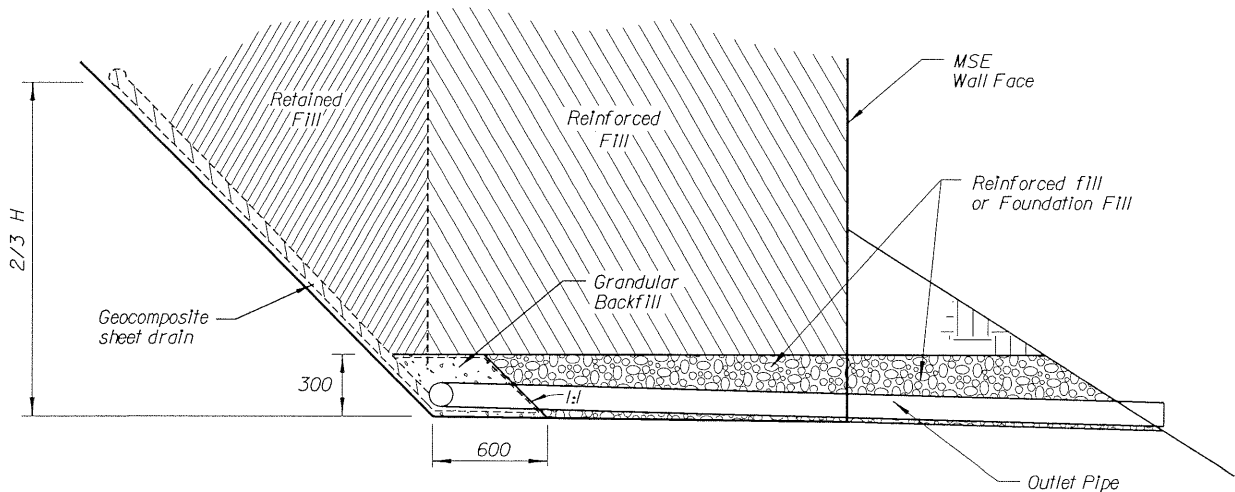
NOTE:

1. Outlet underdrains at lowpoints of wall subexcavation and at 15.0 (max) spacing.
2. Geocomposite Sheet Drains shall be placed in 1.5 m (Max.) wide strips with spacing X to achieve a 30% - 5% coverage (Example; $X = 5.0$ m for a 1.5 m wide stripe).
3. Granular backfill shall meet the requirements of subsection 703.03(a) of the FP 96.
4. Cover the end of the outlet pipe with galvanized 12.7 mm hardware cloth, wire size 1.0 mm. Hold the screen securely in place with standard coupling bands or by other approved means.
5. Mark the outlet of the underdrain with a delineator post or other suitable marker.
6. See Metric Special M255-02 for MSE Wall Typical Section and Details.
7. Geocomposite Sheet Drain shall meet the requirements of subsection 714.02(b).
8. Collector Pipe, Outlet Pipe, and Fittings shall meet the requirements of Subsection 706.08.

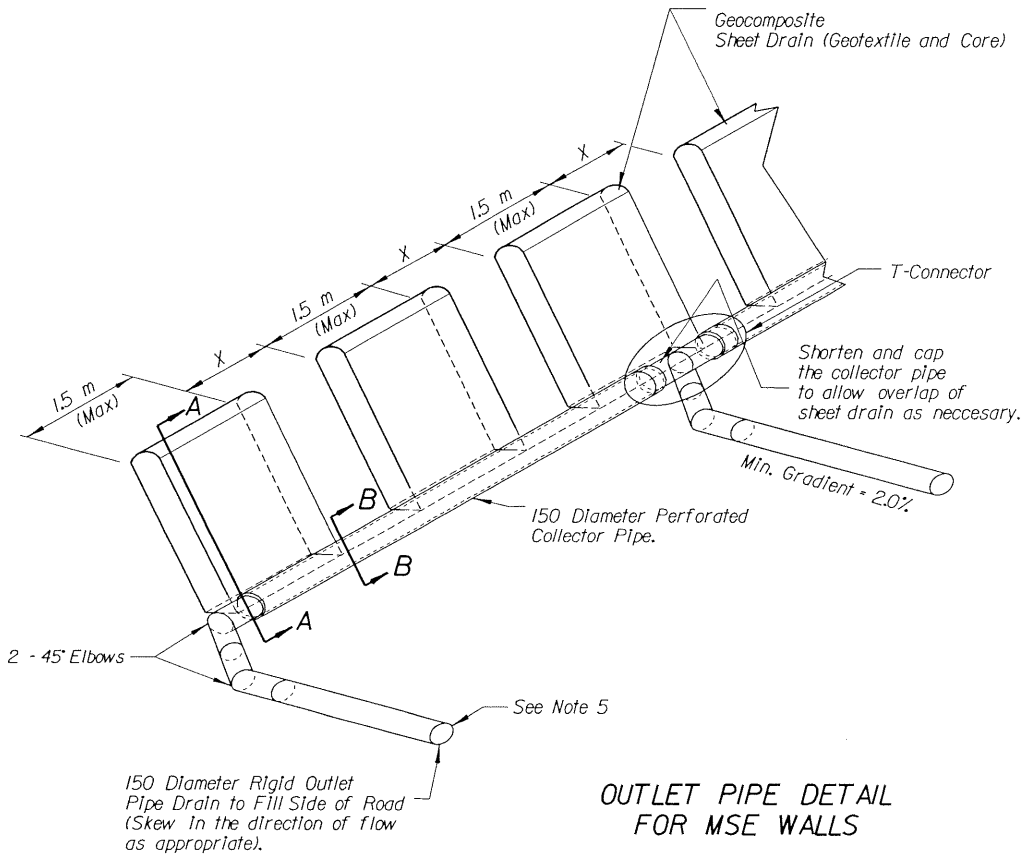


SECTION B-B

SECTION A-A



GEOCOMPOSITE SHEET DRAIN
FOR MSE WALLS



OUTLET PIPE DETAIL
FOR MSE WALLS

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10/01/2003

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION CENTRAL FEDERAL LANDS HIGHWAY DIVISION	
METRIC SPECIAL MSE WALL DRAINAGE DETAIL	
PROJECT SPECIFIC DRAWING	SPECIAL
REVISED:	CM605-05